

REMARKS

Claims 1-6 and 8-15 are now pending in this application. Claims 1, 8, and 11 are independent. Claims 1, 5, 8, and 11 have been amended, claim 7 has been canceled, and claim 15 has been added by this amendment.

No new matter is involved with any claim amendment or new claim.

Objection to the Specification

Withdrawal of the objection to the Specification is requested.

Applicants submit that the Specification's reference to "INV1OUT" and "INV2OUT" at the page and line number indicated by the Examiner (i.e., paragraph [0025] of the originally-filed and published application) is correct.

The circuit of FIG. 3 indicates terminals labeled "INV1OUT" and "INV2OUT". However, while the terms "INV1OUT" and "INV2OUT" refer to the *voltages* present at those terminals, as is clear from the discussion in paragraph [0025]. See, e.g., FIGS. 4B and 5B which illustrate a time-based plot of these voltages, among other parameters.

Accordingly, amendment of the Specification in this regard is submitted as not being necessary.

Claim Objections

Withdrawal of the objection to claims 1, 8, and 11 is requested.

The Examiner objects to the use of the indefinite article "an" in the first limitation of each of claims 1, 8, and 11, i.e., "an FET transistor...."

Applicants submit that the use of “an” is proper English grammar in this context. As shown in the attached “Essentials of English”¹ excerpt, it is the *sound*, not the actual letter, which determines the form of the indefinite article. Thus, use of “an” in these claim limitations is correct in this instance, where the “short e” sound is involved with the acronym “FET”, i.e., the “eh” sound.

However, Applicants note that the use of the acronym “FET” (for “field-effect transistor”) in the claim renders the further word “transistor” in the claims redundant. Accordingly, claims 1, 8, and 11 have been amended to remove the redundant word “transistor”.

Withdrawal of the objection to claim 5 is requested. This claim has been amended in a manner that is believed to overcome the stated basis for objection.

Withdrawal of the objection to claim 7 is requested. Claim 7 has been canceled, thus rendering its objection moot. New dependent claim 15 recites the subject matter of claim 7, but now depending on independent claim 8.

Unpatentability Rejection over Background Art in View of Wu et al.

Withdrawal of the rejection of claims 1-2, 6, and 8-10 under 35 U.S.C. §103(a) as being unpatentable over Applicants’ Background Art in view of Wu et al. (US 6,552,886) is requested.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference must teach or suggest all the claim limitations.*² Further, the teaching or suggestion to make the claimed combination and the

¹ Essentials of English, Hopper et al., Barron’s Educational Series, Inc., New York, 1973, pp. 28-29.

² See MPEP §2143 (*emphasis added*).

reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.³

The applied art does not teach or suggest all the claim limitations. Specifically, the applied art, taken alone or in combination, does not teach or suggest an ESD protection power clamp for suppressing ESD events that includes, among other features, “...a feedback FET having a drain and source *connected in series with one stage of said inverter circuit* and said power supply terminals, *and having a gate connection connected to said FET gate connection*”, as recited in independent claim 1.

The Examiner offers Wu et al. as disclosing the above-recited feedback FET by hysteresis transistor 28 in FIG. 4, reproduced below.

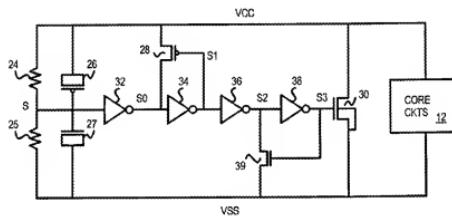


FIG. 4

However, hysteresis transistor 28 is *not* connected in series with any stage of an inverter circuit. Instead, it is connected in parallel with a gate of an inverter, as can readily be seen above in FIG. 4. Further, the gate connection is not connected to the *gate* of FET clamp transistor 30, but instead is connected between the output of inverter 34 and the input of inverter 36, which is not in any way fairly comparable to Applicants' recited "an FET having drain and source connections connected across power supply terminals of an integrated circuit...." Thus, the

³ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and See MPEP §2143.

disclosure of Wu et al. is deficient at least in these two recited aspects of Applicants' claimed invention.

Applicants' FIG. 3, reproduced below, for example, illustrates the claimed arrangement of the feedback FET 28 in series with the output stage drains and sources of FETs 17a and 17b.

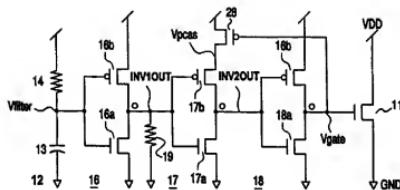


FIG.3

Still further, col. 4, line 61 through col. 5, line 9 of Wu et al. describes the arrangement and function of hysteresis transistor 28 as follows:

Negative feedback is provided by hysteresis transistor 28. Hysteresis transistor 28 is a p-channel transistor with its gate controlled by node S1, and pulls node S0 up to Vcc. During normal operation and normal Vcc voltages, node S0 is high and node S1 is low. Thus hysteresis transistor 28 is on during normal Vcc voltages. When Vcc rises during an ESD event, first inverter 32 switches, driving node S0 low. However, hysteresis transistor 28 is still on, continuing to drive node S0 high. This delays the switching of node S0 until first inverter 32 has almost fully turned on. Eventually, first inverter 32 is able to overcome the drive from hysteresis transistor 28 and drive node S0 low. Then second inverter 34 drives node S1 high, turning off hysteresis transistor 28.

Hysteresis transistor 28 prevents noise from propagating through inverters 34, 36, 38 to turn on clamp transistor 30. Thus further noise immunity is provided.

Claim 2 of Wu et al. further describes the hysteresis transistor and its function as being "...coupled to drive an output of an inverter in the chain of inverters, for increasing a divided

voltage required to turn on the control gate of the clamping transistor, whereby a higher turn-on voltage is required.”

The function of Applicants’ feedback FET arrangement is clearly different from that of hysteresis transistor 28 in Wu et al., and is identified as “whereby during an ESD event, said feedback FET provides dynamic feedback preventing said gate connection from latching said FET for clamping the voltage on said terminals into a conducting mode when power supply potential is applied across said terminals.”

Therefore, both the details of the arrangement and function of Wu et al.’s hysteresis transistor 28 and Applicants’ feedback FET 28 are clearly different.

Similar arguments pertain to the recitations in Applicants’ independent claim 8. In particular, the applied art, taken alone or in combination, specifically Wu et al., does not teach or suggest “...a feedback transistor connected *in series with said second stage pull up transistor*, and having a *gate connection connected to said FET gate connection*...”, as recited in independent claim 8. Wu et al. clearly does not disclose a second stage pull-up transistor, and does not disclose a feedback FET arranged as recited by Applicants.

Accordingly, since the applied art does not teach or suggest all the claim limitations of independent claims 1 and 8, withdrawal of the rejection and allowance of these claims are respectfully requested.

Further, since dependent claims 2-6, 9-10, and 15 variously and ultimately depend from independent claims 1 and 8, these dependent claims are submitted as being allowable at least on that basis, without further recourse to the additional patentable features contained therein.

Allowable Subject Matter

Applicants note with appreciation that claims 3-4 are drawn to allowable subject matter, and would be allowable if rewritten in independent form, and also appreciate that claims 11-14 are allowed.

However, in light of the distinguishing comments over the applied art, Applicants submit that claims 3 and 4 are allowable by their dependency on allowable claim 1, without any need for amendment into independent form.

New Claim

New dependent claim 15 has been drafted to replace original claim 7, which suffered from an incorrect dependency. No new matter is involved with claim 15.

Conclusion

In view of the above amendment and remarks, Applicants believe that each of pending claims 1-6 and 8-15 in this application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number indicated below.

Application No. 10/711,085
Amendment dated March 31, 2006
Reply to Office Action of November 30, 2005

Atty. Docket No.: 21806-00160-US
IBM Docket No. BUR920040079US1

For any fees that are due, including fees for extensions of time, the Director is hereby authorized to charge any fees or credit any overpayment during the pendency of this application to CBLH Deposit Account No. 22-0185, under Order No. 21806-00160-US from which the undersigned is authorized to draw.

Dated: March 31, 2006

Respectfully submitted,

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Attachment: Essentials of English Excerpt

Essentials of English

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THE ADJECTIVE AND THE ADVERB 29

Because he was a *jolly*, *green* giant, he was *green* and *jolly*. [*Green* and *jolly* are adjectives.]

(2) Adjectives and adverbs can sometimes be distinguished by form. Some of the several forms are listed below, including the most important one, which is that most adverbs are adjectives plus *ly*.

ADJECTIVE	ADVERB
theoretical	theoretically
different	differently
honorable	honorable
cowardly	cowardly
hourly	hourly
collective	collectively
backward	backward
shore	shoreward
crab	crabwise
buck	buckward
shore	shoreward
crab	crabwise

Recently, adverbs ending with *wise* have become popular, almost too popular because the reader may not be prepared for a particular noun's becoming an adverb. The following sentence should be avoided at present: *The Foreigners did a remarkable job, speedily-translating.*

4B The Article

The most used adjectives are the articles, *a*, *an*, and *the*. *A* and *an* are called *indefinite* articles because they single out any unspecifed member of a class. *The* is called a *definite* article because it specifies a particular member or a particular group of members of a class.

A is used when it immediately precedes a word beginning with a consonant sound: *a book, a tree*. *An* is used when it immediately precedes a word beginning with a vowel sound: *an apple, an orchid, a city*.

NOTE: It is the sound, not the actual letter, which determines the form of the indefinite article: a university, an R.C.A., self-education.

vision set, an 8-sided object: In some instances when there are different pronunciations of the same word, the pronunciation used by the speaker or writer determines the form of the article. If the writer pronounces the word *humble* containing the aspirant or *h*-sound, he should write *an humble person*. If he similarly omits the aspirant in *historical*, he should write *an historical*.

4C Functions of Adjectives and Adverbs

While adjectives and adverbs can perform the same functions (verb complements and noun modifiers), their functions are usually quite distinct.

Adjectives modify a noun or *function as the complements of copulative verbs such as *be*, *seem*, *feel*.*

The old man, tired and *sulky*, waited for the return of his children. [Old, tired and *sulky* modify the noun man.]

I am *happy* that he feels *good*. [*Happy* and *good* are the

complements of the verbs *be* and *feel*.]

4D Functions of Adverbs

Adverbs modify verbs, other modifiers, and sentences.

He spoke to her *quietly*. [modifies the verb spoke]

Naturally, he spoke to me. [modifies the whole sentence]

She sang *extremely* well. [modifies the adverb well]

4E Comparison of Adjectives and Adverbs

Adjectives and adverbs have positive, comparative, and superlative forms. The positive form is the basic word: *small*, *beautiful*, *hurt*, *loudly*.